



## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003642

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-16 as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* 1-18 as amended (together with any statement) under Article 19
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets 1/4-4/4 as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (specify): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (specify): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (specify): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (specify): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-18	YES
	Claims		NO
Inventive step (IS)	Claims	1-18	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

1. This report makes reference to the following document:

D1: US 2 757 745 A (FRANS VERHAGE GERARD ET AL), 7 August 1956 (1956-08-07)

2. Document D1, which is considered to represent the closest prior art, discloses a rotorcraft rotor and a process for adjusting the pitch of a rotor blade of such a rotorcraft rotor. The subjects of independent claims 1 and 14 differ therefrom in that the blade pitch adjustment device is not mounted on a bearing.

2.1 The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

2.2 The present invention can therefore be considered to address the problem of achieving improved aerodynamic properties, a lower rotor weight and an adjustment of the rotor blade pitch as easy and effective as possible.

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
2.3	<p>The solution to this problem, as proposed in claim 1 of the present application, involves an inventive step (PCT Article 33(3)) for the following reasons:</p> <p>although the use of rotor blade connections not mounted on a bearing and its advantages are well known to a person skilled in the art, it would not have been obvious to apply this solution, proceeding from the closest prior art (D1), since a number of modifications and additions to the rotorcraft rotor of D1 would have been necessary.</p> <p>Claims 2-18 are dependent on claims 1 and 14 and thus also meet the PCT requirements for novelty and inventive step.</p>

## Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

3. The application does not meet the requirements of PCT Article 6 because the claims are unclear.

- 3.1 Claims 1 and 14 are unclear and do not meet the requirements of PCT Article 6 because the subject matter for which protection is sought is not clearly defined. The following functional indications do not enable a person skilled in the art to determine what technical features are necessary to carry out said functions:

Claim 1:

an integral blade pitch adjustment device controlled by centrifugal force and not mounted on a bearing.

Claim 14:

automatic adjustment of the blade pitch by rotating the rotor blade connection mounted on the side of the rotor head without a bearing.

Although blade pitch adjustment devices controlled by centrifugal force are already known to a person skilled in the art, the technical features necessary to obtain a blade pitch adjustment device controlled by centrifugal force and mounted without a bearing would not have been obvious (cf. 2.3).

- 3.2 The appendancies of claims 2-13 and 15-18 are

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Box No. VIII

Certain observations on the international application

unclear, since several claims refer to features  
("rotor blade connection arm(s)") which cannot be  
found in claims 1 and 14.